(1) GENERAL INFORMATION

(i) APPLICANT: Feldhaus, Andrew

(ii) TITLE OF THE INVENTION: TRANSCRIPTIONALLY-ACTIVATED
      AAV INVERTED TERMINAL REPEATS (ITRs) FOR USE WITH
RECOMBINANT
      AAV VECTORS

(iii) NUMBER OF SEQUENCES: 21

(iv) CORRESPONDENCE ADDRESS:
  (A) ADDRESSEE: MORRISON & FOERSTER
  (B) STREET: 755 PAGE MILL ROAD
  (C) CITY: PALO ALTO
  (D) STATE: CA
  (E) COUNTRY: USA
  (F) ZIP: 94304-1018

(v) COMPUTER READABLE FORM:
  (A) MEDIUM TYPE: Diskette
  (B) COMPUTER: IBM Compatible
  (C) OPERATING SYSTEM: DOS
  (D) SOFTWARE: FastSEQ for Windows Version 2.0

(vi) CURRENT APPLICATION DATA:
  (A) APPLICATION NUMBER:
  (B) FILING DATE: 21-OCT-1997
  (C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:
  (A) APPLICATION NUMBER:
  (B) FILING DATE:

(viii) ATTORNEY/AGENT INFORMATION:
  (A) NAME: Dylan, Tyler M
  (B) REGISTRATION NUMBER: 37,612
  (C) REFERENCE/DOCKET NUMBER: 22627-20038.00

(ix) TELECOMMUNICATION INFORMATION:
  (A) TELEPHONE: 650-813-5600
  (B) TELEFAX: 650-494-0792
  (C) TELEX: 706141

  (2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 40 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single
  (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

TCGAGTATAT AAGCAGAGCT CGTTTAGTGA ACCGTCAGAG   40

  (2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:
  (A) LENGTH: 40 base pairs
  (B) TYPE: nucleic acid
  (C) STRANDEDNESS: single

(D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

TCGACTCTGA CGGTTCACTA AACGAGCTCT GCTTATATAC   40

        (2) INFORMATION FOR SEQ ID NO:3:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 50 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

TCGAGTTCTC CCTCTTCCCC TTTAATTCCA CCTTAAAACA TCTGCAAAAC   50

        (2) INFORMATION FOR SEQ ID NO:4:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 50 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

TCGAGTTTTG CAGATGTTTT AAGGTGGAAT TAAAGGGGAA GAGGGAGAAC   50

        (2) INFORMATION FOR SEQ ID NO:5:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 60 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

TCGAGTGCAC GCTCACGCAG GTTGCTATAT AAGCAGAGCT CGTTTAGTGA ACCGTCAGAG   60

        (2) INFORMATION FOR SEQ ID NO:6:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 60 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

TCGACTCTGA CGGTTCACTA AACGAGCTCT GCTTATATAG CAACCTGCGT GAGCGTGCAC   60

        (2) INFORMATION FOR SEQ ID NO:7:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 67 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

TCGAGGCGCC GCTAGGGGTC TCTCTCGGGT GCTATATAAG CAGAGCTCGT TTAGTGAACC   60

43

GTCAGAG (2) INFORMATION FOR SEQ ID NO:8:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 67 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

TCGACTCTGA CGGTTCACTA AACGAGCTCT GCTTATATAG CACCCGAGAG AGACCCCTAG   60
CGGCGCC   67

(2) INFORMATION FOR SEQ ID NO:9:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 82 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

TCGAGCCGCT AGGGGTCTCT CTCGGGTGTG GGCCGGATCA GCTGACTCGC TGAGCCCCGC   60
CGCCGCGCTC GGGCTCCGTC AG   82

(2) INFORMATION FOR SEQ ID NO:10:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 82 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

TCGACTGACG GAGCCCGAGC GCGGCGGCGG GGCTCAGCGA GTCAGCTGAT CCGGCCCACA   60
CCCGAGAGAG ACCCCTAGCG GC   82

(2) INFORMATION FOR SEQ ID NO:11:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 82 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

TCGAGAACGG TGACGTGCAC GCGTGGGCGG AGCCATCACG CAGGTTGCTA TATAAGCAGA   60
GCTCGTTTAG TGAACCGTCA GA   82

(2) INFORMATION FOR SEQ ID NO:12:

   (i) SEQUENCE CHARACTERISTICS:
     (A) LENGTH: 83 base pairs
     (B) TYPE: nucleic acid
     (C) STRANDEDNESS: single
     (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

TCGACTCTGA CGGTTCACTA AACGAGCTCT GCTTATATAG CAACCTGCGT GATGGCTCCG   60

44

CCCACGCGTG CACGTCACCG TTC   83

        (2) INFORMATION FOR SEQ ID NO:13:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 110 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

TCGAGCTGGA GCCGGTGTCA GGTTGCTCCG GTAACGGTGA CGTGCACGCG TGGGCGGAGC   60
CATCACGCAG GTTGCTATAT AAGCAGAGCT CGTTTAGTGA ACCGTCAGAG   110

        (2) INFORMATION FOR SEQ ID NO:14:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 110 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

TCGACTCTGA CGGTTCACTA AACGAGCTCT GCTTATATAG CAACCTGAGT GATGGCTCCG   60
CCCACGCGTG CACGTCACCG TTACCGGAGC AACCTGACAC CGGCTCCAGC   110

        (2) INFORMATION FOR SEQ ID NO:15:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 83 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

TCGAGGCCAA TCAGCGTGCG CCGTTCCTTT TCTGGCTCGA GCGGCCCCTA TATAAGCAGA   60
GCTCGTTTAG TGAACCGTCA GAG   83

        (2) INFORMATION FOR SEQ ID NO:16:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 83 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

TCGACTCTGA CGGTTCACTA AACGAGCTCT GCTTATATAG GGGCCGCTCG AGCCAGAAAA   60
GGAACGGCGC ACGCTGATTG GCC   83

        (2) INFORMATION FOR SEQ ID NO:17:

      (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 88 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

TCGAGCCCCA CCCCCTGCCC CACCCCCTGC CCCACCCCCT GCCCCACCCC CTGTATATAA   60

45

GCAGAGCTCG TTTAGTGAAC CGTCAGAG   88

     (2) INFORMATION FOR SEQ ID NO:18:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 88 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

TCGACTCTGA CGGTTCACTA AACGAGCTCT GCTTATATAC AGGGGGTGGG GCAGGGGGTG   60
GGGCAGGGGG TGGGGCAGGG GGTGGGGC   88

     (2) INFORMATION FOR SEQ ID NO:19:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 10 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

GCCGAGCGGG   10

     (2) INFORMATION FOR SEQ ID NO:20:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 10 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

CCGAAAGTTG   10

     (2) INFORMATION FOR SEQ ID NO:21:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 10 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: single
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

CCTTTTCTGG   10